1960

An Experimental Study of the Relationship Between Aggression and Satiation in Nursery School Children.

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Mic 60-5927

SAUNDERS, Hardis Hargrove. AN EXPERIMENTAL STUDY OF THE RELATIONSHIP BETWEEN AGGRESSION AND SATIATION IN NURSERY SCHOOL CHILDREN.

Louisiana State University, Ph.D., 1960
Psychology, clinical

University Microfilms, Inc., Ann Arbor, Michigan

AN EXPERIMENTAL STUDY OF THE RELATIONSHIP BETWEEN AGGRESSION AND SATIATION IN NURSERY SCHOOL CHILDREN

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by
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B.A., Louisiana State University, 1947
M.A., Louisiana State University, 1948
August, 1960

ACKNOWLEDGMENT

The author wishes to express gratitude to Dr. Brendan A. Maher and Dr. Thomas W. Richards for their skillful guidance and careful direction of this dissertation. She wishes to acknowledge the thoughtful consideration given by Dr. Irwin A. Berg, Dr. M. Ray Loree and Dr. Charles Watkins. The author is also indebted to Mr. Winborn Davis, Louisiana State Hospital Board, for aid in obtaining research funds.

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ABSTRACT

The purpose of this experiment is to determine the relationship between satiation and molar aggressive behavior in a play therapy situation, with nursery school children. Baldwin defines satiation as: "the process of reducing the strength of a need through repetition of the goal activity over and over again." Aggression is defined operationally as socially unacceptable behavior as measured by Body's scale of aggression.

Forty-eight children, the least aggressive and most aggressive from two nursery schools, were observed for aggressive behavior in a free-play situation. They ranged in age from 4 years 0 months to 5 years 11 months. There were two observers for each group. The 20 children having aggressive scores above the mean for their group were selected as subjects for this experiment. Ten were placed in the Satiation Treatment, Group I, while the other ten were placed in the "no treatment" Control Group II. Prior to treatment, the 20 children were given Amen's Anxiety Scale for preschool children and the Stanford-Binet Scale, Form L. Statistical analysis of their scores indicated that the groups were equivalent, prior to treatment, in age, intelligence and aggressiveness and anxiety.

The ten children in Group I were given play therapy, a modified form of David Levy's release therapy, for eight one-half hour play sessions on successive days. The treatment was given in a portable play room which had a one-way vision mirror and 17 concealed mats to which were wired electronic counters. Thus, activity during the play sessions could be tabulated. This was considered one measure of satiation. There was also a tabulation of overt aggressive behavior during treatment. Aggressive acts were considered another measure of satiation.

There were two tables in the play room: one, with toys usable as "utensils" of aggression, the other with "targets" of aggression.

One week after completion of the satiation treatment, Group I was observed again for aggressive behavior in a free play situation by Observer II. They were also retested on Amen's Anxiety Scale. Thus, there were pre and post treatment scores for aggression and anxiety for Group I. The same procedure was used for Group II, the no treatment group.

The experimental design was based on a 2x2 analysis of variance for pre and post treatment scores of Groups I and II on aggression. The value of "F" was 9.35, significant at the 1% level. Further statistical analysis indicated that all four hypothesis were substantiated. There was satiation of molar aggressive behavior for Group I. However, not only

were the aggressive acts during treatment tabulated, but also activity, identifications and fantasy. These processes, according to Bender are normal processes which aid the growth of the ego in the normal child. It is this theory of therapy as an aid to normal growth processes that is emphasized in this study.

Since this experimental design did not allow for control of satiation, it cannot be concluded that changes in aggressive behavior are due to satiation alone. Other processes which may have influenced change were: (1) the therapeutic relationship; (2) identifications, (3) fantasy and (4) anxiety. More research is needed to clarify and isolate relevant and vital processes of ego growth that may take place during play therapy with children.

CHAPTER I

INTRODUCTION

The purpose of this experiment is to determine the relationship between satiation and aggressive molar behavior in a play therapy situation with nursery school children.

Baldwin defines satiation as "the process of reducing the strength of a need through repetition of the goal activity over and over again (6)." For purposes of this study satiation is defined operationally as: "repetition of molar aggressive behavior during 8 one-half hour play sessions where the child is directed and encouraged to play aggressively."

Aggression is defined operationally as socially unacceptable behavior as measured by Body's scale of aggression.

For quite some time there has been controversy in clinical circles regarding the relative efficacy of simple catharsis or acting out (1), (18). Baldwin states that some people feel that acting out will "get it out of his system," thus alleviating any residual emotional trauma (24), (25). Some think catharsis a deciding factor (17). Others feel satiation leads to aggressive behavior (12). None of these theories have been explored experimentally so as to yield a definitive answer.

Catharsis

Catharsis is equated with abreaction, according to Fenichel, and may be defined as: "liberation of hitherto blocked emotions." This phenomena alone is not decisive in effecting lasting improvements. It is limited to certain types of disorders such as: traumatic neurosis, war neurosis, depressions and used as a part of narcosynthesis (17).

Acting out

Acting out, on the other hand, includes abreaction but is more than that since it consists in the patients attempting to use the transference not merely to give an account of his newly mobilized conflicts, but also to experience them again in relation to the therapist (17).

When the child "acts out" he dramatizes his problem as well as verbalizing it (11).

David Levy's release therapy, the technique to be used in Satiation Treatment, is a method which uses the acting out principle in play to the highest degree (25). In release therapy the interpretive function of the therapist is reduced to a minimum. He simply supplies the main actors (toys) and the dramatic situation. Repetitions are encouraged until the child has finished a sequence. There are three forms of activity in release therapy: (1) simple release of aggressive behavior; (2) release of feeling in a standard situation and (3) release of feelings in a specific play situation set

up to resemble a definite experience in the life of the patient.

Anxiety

Since, according to Amens (2), there is a relationship between anxiety and the types of play of nursery school children, it was felt that one variable which should be controlled in any study of acting out of aggressive behavior, was that of anxiety. There is a correlating between constructive-creative play and anxiety of .52. Solomon also described a group of children similar to those selected for this study. He calls this type child the aggressive-impulsive child. These are children who show overt hostile behavior. Solomon states this group often consists of children who are using their aggression as a fairly successful defense against anxiety. Therefore prior to satiation, the two groups used in this study were equated on aggression and anxiety.

This experiment is primarily designed to test some propositions related to directive acting out or satiation of aggression in a play situation (6), (25). The first of these proposes that repeated aggressive behavior produces a reduction in the strength of aggressive tendencies. A second proposition suggests that, as aggressive behavior may occur as a defense against anxiety, the reduction in aggressive behavior produced by satiation, will be followed by a

concomitant rise in anxiety.

Experimental Hypotheses

There were two groups: Group I, the experimental group called the satiation treatment group, and Group II, the "no treatment" group called Control Group II. The following propositions have been formulated which will be tested:

Hypothesis I

If satiation reduces need through repetition, then overt aggressive behavior measured in a free play situation prior to treatment, should be significantly lower when measured after 8 satiation play sessions than when measured after a simple interval.

Hypothesis II

If aggression is one form of reaction against anxiety, then anxiety will increase as aggression is lowered through satiation (17) (2).

CHAPTER II

METHOD

Subjects

From a group of nursery school children, forty-eight subjects were selected for this experiment. The teachers were asked to select the twelve least aggressive and the twelve most aggressive children in their school. The age range was between four years and 0 months and five years eleven months. Twenty-four children were selected from the Presbyterian nursery school and twenty-four from the Episcopal school.

There were three measures used in the selection of these subjects: (1) intelligence, as measured by the 1937 revision of the Stanford-Binet Scale, Form L; (2) aggression as measured by Body's scale of aggression and, (3) anxiety as tested by Amen's Anxiety scale for preschool children (10), (2).

The Body scale of aggression has clear-cut face validity. The reliability is .87 and .81 (10). Amen's anxiety scale for preschool children has a validity of .59 and reliability of .91 (10). (See appendix for forms and instructions).

There were two observers for each group tabulating aggressive behavior during free play according to Body's definitions of aggression. The observers used a time-sample,

taking twenty-one samples of aggressive behavior for each child. Each time sample was of two and one-half minutes duration. There was a total of 1,008 observations for the 48 children (4).

Two observers were used for each group, not only to determine inter-reliability of observations, but to avoid bias, as Observer II and Observer III retested children after treatment. Observer I was the therapist during the play sessions. The inter-rater reliability, computed using the product moment correlation, between Observers I and II was .98, while comparable reliability for Observers I and III was .99. Observers were carefully trained prior to taking time samples.

Besides the tabulation of aggression, prior to treatment, these children were given the Stanford-Binet, Form L, to determine intelligence. They were also given Amen's anxiety scale for preschool children (10), (2).

The groups were matched on intelligence, age, aggression and anxiety prior to treatment. The age range was from four years 0 months to five years eleven months, with a mean of 4.7. The mean I.Q. on the Stanford-Binet for Group I was 115, while the mean for Group II was 111.33. There was no statistically significant difference between these means.

Those children whose aggression scores were above the mean for their group were selected to participate in this

experiment. The mean aggressive score for the 24 children from the Presbyterian school was 32.33, while the mean aggressive score for the 24 children from the Episcopal school was 35.70. The t value for difference between these means was .3484, which is non-significant. Therefore, these groups can be considered equivalent. The pre-treatment anxiety score for Group I was 31.8 and for Group II was 35.30. There was no significant difference between these means.

The children with the ten highest aggression scores from the Presbyterian school were placed in the Satiation Treatment, Group I. Those with the ten highest aggression scores from the Episcopal school were placed in the "no treatment" group, Control Group II.

Apparatus

A two-sided 9x12 movable screen with a one-way vision mirror was placed in the corner of a room assigned by nursery school authorities. The two-sided screen, when meeting two sides of the wall of the room, formed an enclosed playroom. There were 17 rubber mats, wired with counters, which were concealed by a grass rug covering the entire floor. An electrical tabulator was outside the room which recorded the number of times a child stepped on each of the mats. Thus, activity during satiation sessions could be recorded. Activity during treatment was one measure of satiation.

Within the playroom were two tables. On the first table were placed: one rubber dagger, one bow and arrow, one dart gun with darts, aeroplane, one peg-board with hammer and a box of modeling clay. These toys were called the "utensils" of aggression.

The second table was placed against the wall of the playroom opposite the one-way vision mirror. This table held dolls representing an adult female, an adult male, two smaller dolls, male and female, representing peers or siblings and one baby doll. There were also cowboys and Indians and so-called "dangerous" animals. These toys were called "targets" of aggression.

There was a chair for the therapist, so placed it did not set off the activity mats.

A tabulation sheet was made up for each individual child and each treatment session (see appendix). It was divided into three columns: (1) time, (2) utensils of aggression, and (3) targets of aggression. The therapist could record, during treatment, the overt aggressive acts on this sheet. This tabulation of aggression is the second measure of satiation during treatment. There was also room on the sheet to record verbalizations the child made regarding the identity of the targets of aggression, fantasy play or transference phenomena.

Treatment

Satiation treatment, consisting of 8 one-half hour play sessions, was given the 10 children in Satiation Treatment Group I, on successive days. One week after satiation was completed these children were observed again for aggressive behavior in a free-play situation by Observer II.

Twenty-one observations of two and one-half minutes duration for each of the 10 children was made, making a total of 210 observations for this group. These were post-treatment observations.

One week after all pre-treatment observations of aggression had been completed on Group II, Observer III re-observed the 10 children in the "no treatment" Control Group II in a free-play situation. There were 21 post-treatment observations on the 10 children, making a total of 210 post-treatment observations of aggression by Observer III. For the two groups, I and II, there was a total of 420 post-treatment observations made.

One week after Satiation Treatment was completed, Observer II retested Group I on Amen's Anxiety scale for preschool children. Then one week after conclusion of pre-treatment observations of Control Group II, Observer III retested this group on Amen's Anxiety scale.

Treatment attitudes of experimenter

With the Satiation Treatment Group I, the therapist was accepting of the child's behavior, and in this manner attempted to establish a therapeutic relationship. She actively suggested and directed the child in his use of aggressive utensils and targets. This was done carefully, since if the child showed fear or resistance to direct expression of aggression against dolls representing parents or siblings, he was directed to more remote objects such as a neutral target or animal toys. The experimenter rewarded by praise the child when he used aggressive toys (1).

As each child entered the room, the therapist structured the situation for him as follows: "Here are some toys, you can play with any of them. You can play any way you want to. We have only one rule, you cannot do anything to hurt yourself or hurt me, and I won't let anything hurt you."

The circumstances of the experiment precluded the establishment of regular observation and rating of the therapists' consistency in this situation. However, as any failure on the therapists' part to main a permissive attitude would serve to weigh the results against the hypothesis, it was felt justifiable to proceed in this way.

CHAPTER III

RESEARCH DESIGN

A 2x2 analysis of variance was used with pre-treatment aggression scores for Satiation Group I and post-treatment aggression scores for Group I. Also there were pre-treatment and post-treatment scores of aggression for the Control Group II. The rows were divided into pre- and post-treatment scores, while the columns were Group I and Group II.

CHAPTER IV

RESULTS

An analysis of variance (2x2) was made to determine whether there were main effects between Experimental Group I and Control Group II.

Individual t scores were computed between cells to identify the significant differences between the pre- and post-observations of aggression in the Control Group II. A t value was obtained of .30 which is not significant.

As mentioned above there was no significant difference between means of aggression between the 24 children from the Episcopal school and the 24 children from the Presbyterian school that made up the original population of 48 subjects. However the samples used in this study did differ in their original means. Thus, for Experimental Group I, mean aggressive score was 53.4; Control Group II mean aggressive score was 68.5. The t score between these means is significant at the 5% level. This brought up the question as to whether this difference in pre-treatment scores affected the results after treatment.

In an attempt to answer this statistically an F test for homogeneity of variance was made. This F equalled 1.23, which is not significant, therefore, a common population was

TABLE 1

Results of analysis of variance of satiation of aggression, Group I, pre- and post-treatment observations and Control Group II, pre- and post-observations of aggression. (N-40)

Source of Variance	Degrees of Freedom	Sum of Squares	Mean Square	F
Between sets	3	10,107.30	2,526.82	9.35*
Within sets	36	9,755.97	270.44	
Total	39	19,863.27		

*P greater than .01

tenable.

To go a step further, however, correlations were made between the magnitude of absolute difference between pre- and post-aggressive scores of Satiation Group I. The r was .8205 which is significant. Then a correlation was made between the magnitude of absolute difference between pre- and post-aggressive scores of Control Group II. This r was .1760, which is not significant.

These statistics indicate that even though raw scores on pre-treatment aggression for Control Group II were higher than Experimental Group I, prior to treatment, they made no difference in the results of treatment.

Aggression scores

The changes in aggression scores for the Treatment Group I are presented in Table 2. An inspection of the table shows the post-treatment aggression scores were significantly lower than those obtained before treatment.

Anxiety scores

The pre- and post-treatment anxiety scores are given in Table 3. It will be seen that there was a significant increase in anxiety scores as a result of treatment. The data in Tables 2 and 3 may be compared with the parallel data obtained for the control group. These results are given in Tables 4 and 5. As will be seen, no significant changes

TABLE 2

The t score for Satiation Treatment Group I, pre- and post-aggression

Aggression	Mean	t score
Pre-treatment aggression	43.4	
Post-treatment aggression	27.0	4.22*
N-20		

*Significant at .01 level

TABLE 3

The t score for Group I, pre- and post-anxiety. (N-20)

Anxiety	Mean	t score
Pre-treatment anxiety	31.8	
Post-treatment anxiety	50.1	4.16*

*Significant at .01 level

TABLE 4

The t score of pre- and post-aggression for Control Group II (N-20)

Aggression	Mean	t score
First observation of aggression	68.5	
Second observation of aggression	66.0	.30*

*Not significant

TABLE 5

The t score on pre- and post-anxiety,

Control Group II (N-20)

Anxiety	Mean	t score
First test of Anxiety	35.30	
Second test of Anxiety	32.11	.60*

*Not significant

occurred in the Control Group II during the period between observations.

Analysis of results of treatment sessions

Since satiation involves a "consummatory response," two measures of actual satiation of aggression during treatment were used. They were: (1) overt aggressive acts and verbalizations, as tabulated by the therapist during each treatment session, and (2) activity as recorded by the mats.

The sequential changes in aggressive behavior from one play session to the next are given in Figure 1. The marked decline in aggression is substantiated by the t score between play session I and play session VIII. This was 3.93 and is significant at the .01 level.

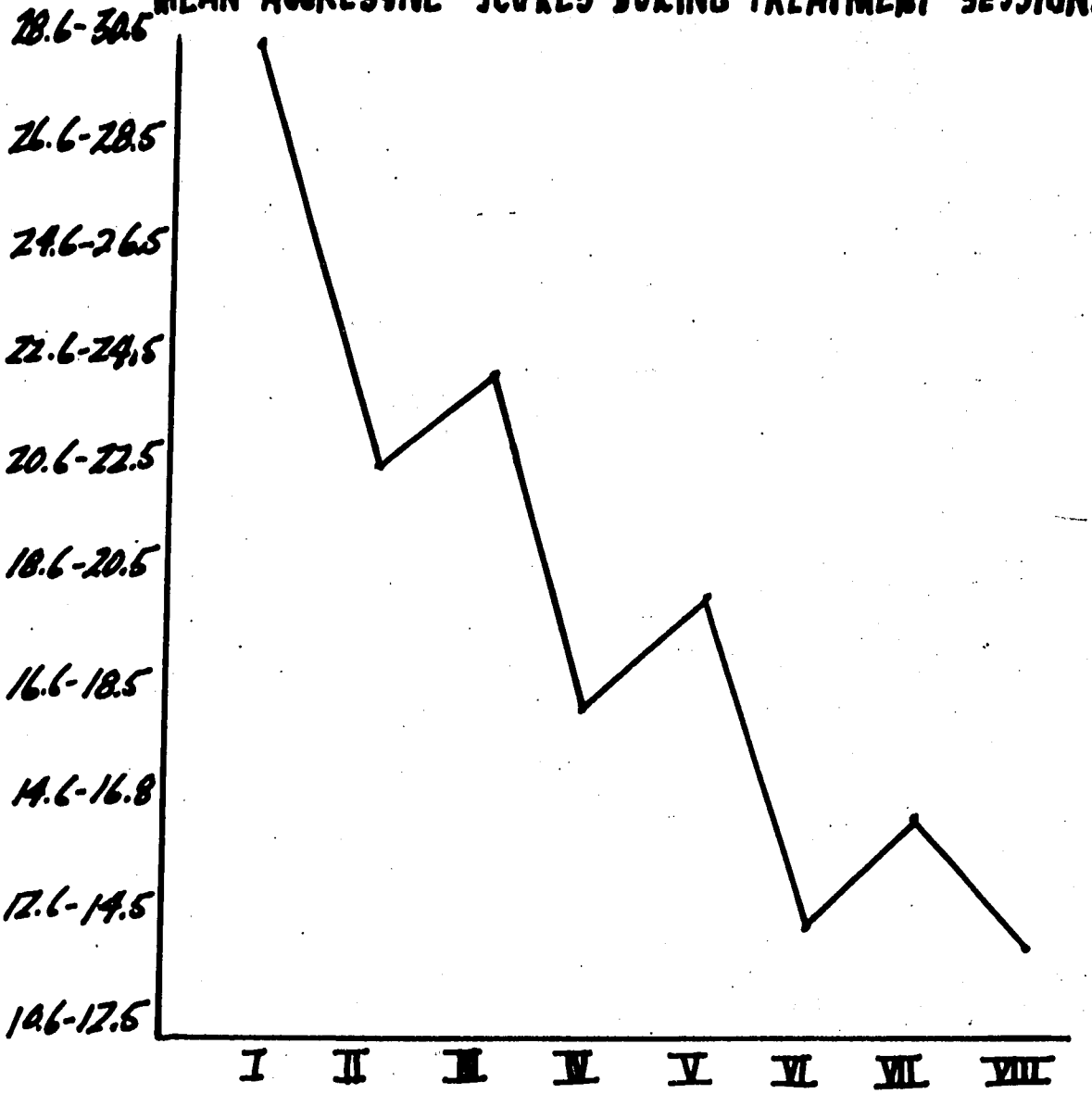
However, there was no significant correlation between the magnitude of absolute difference between pre- and post-aggression scores for individuals and the number of aggressive acts performed during treatment sessions.

The second measure of satiation was that of activity. There was a correlation between aggression and activity of .32, which is significant at the 1% level for an N of 80. There were ten children, eight play sessions of one-half hour each, making an N of 80.

Activity during treatment was determined by an electronic counter which registered each time a child stepped

FIGURE 1

MEAN AGGRESSIVE SCORES DURING TREATMENT SESSIONS



10 children, 8 play sessions of ½ hour each
total 80 sessions or 40 hours of treatment

on one of the mats (see appendix for raw data). It was found there was a significant change in activity between Play Session I and Play Session VIII. The t score was 2.34, significant at the 5% level. This indicates that as treatment progressed, activity decreased so it was lower at treatment session VIII than when treatment began during Session I. This is the second measure of satiation (see Figure 2).

However, there was no significant correlation between absolute difference between pre- and post-treatment aggression scores and the amount of activity occurring for a particular child during treatment.

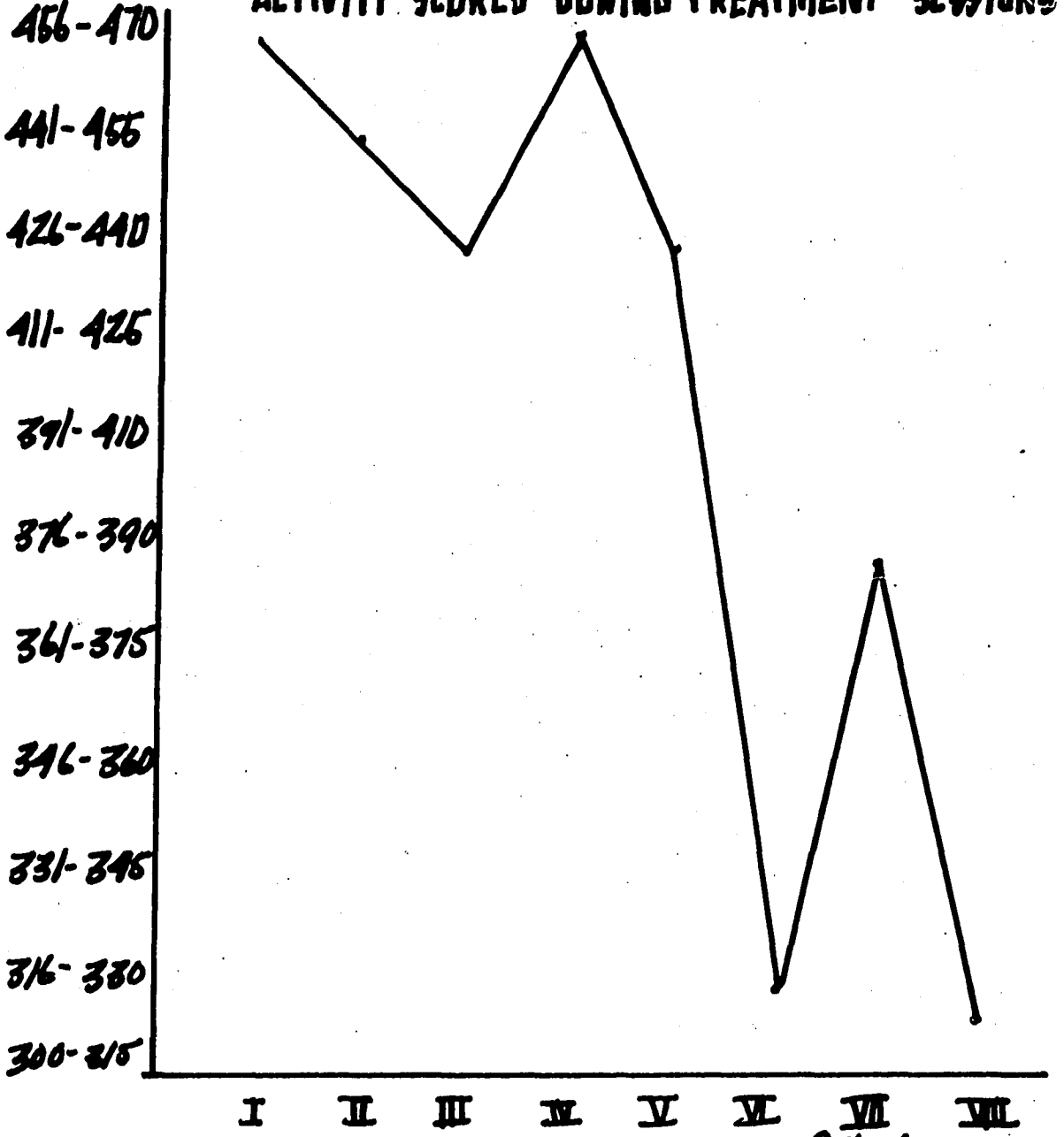
Between Play Sessions V and VI, a sharp drop in activity occurred. In an attempt to determine what happened, other processes which were occurring during treatment were tabulated. Two of these which stood out sharply were identifications and fantasy.

Identification

Identifications were defined by the child calling himself someone other than himself, such as: "I am daddy," or "I am Jim Bowie." In examining Figure 3, showing changes in number of identifications during treatment, it will be noticed that there was a sharp drop between Play Sessions III and IV, then a sharp increase between IV and V. There appears to be a negative relationship between activity and identifications in Sessions IV and V, as when identifications

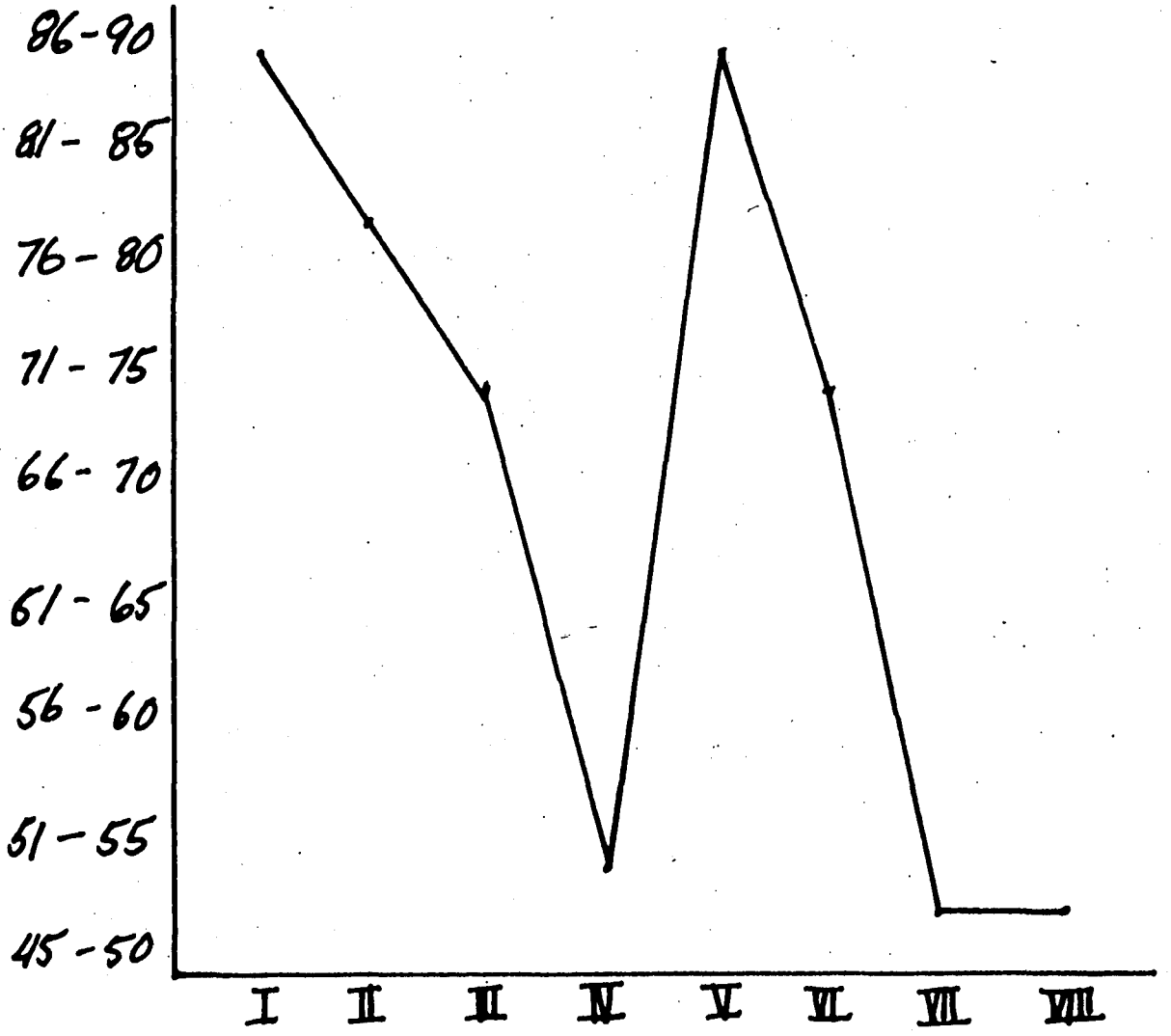
FIGURE 2

ACTIVITY SCORES DURING TREATMENT SESSIONS



10 children, 8 play sessions of ½ hour each
total 80 sessions or 40 hours of treatment

FIGURE 3
IDENTIFICATION SCORES DURING TREATMENT SESSIONS



10 children, 8 play sessions of ½ hour each
total 80 sessions or 40 hours of treatment

increased, activity decreased. Also in Sessions VI and VII--as activity increased, identifications decreased. It seems reasonable to speculate that this negative relationship is due to the incompatibility of simultaneous verbal and motor behavior.

The t score of mean identification scores between Play Session I and Play Session VIII is 2.101, significant at the .05 level. There was a decrease in numbers of identifications as treatment progressed.

Fantasy

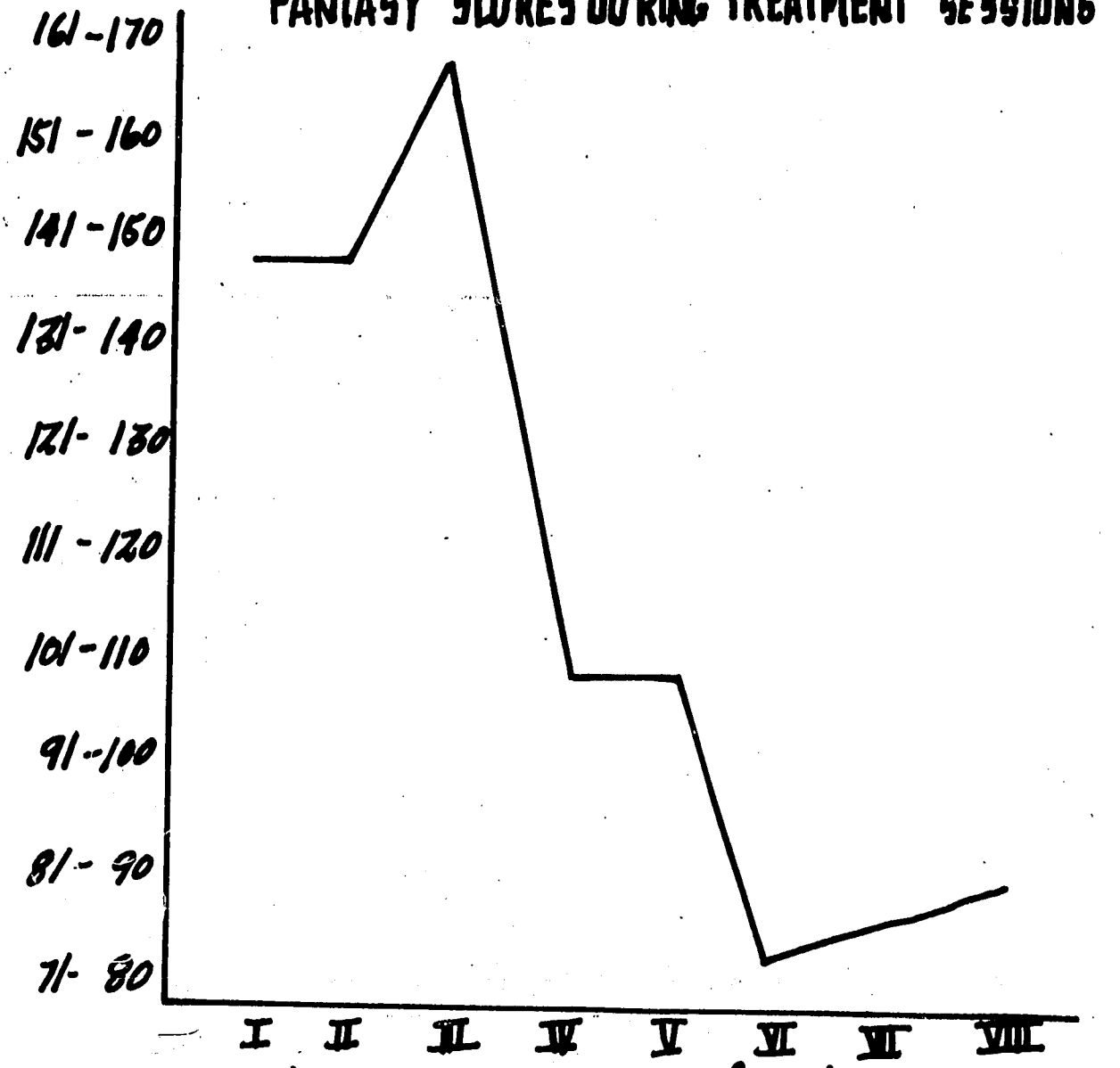
Fantasy was scored whenever the child proceeded to act as though he were the character he identified himself with. Fantasy was defined as identification plus "as if" behavior.

The child would say, "I am Jim Bowie," and proceed to play-like he was this character. Or he would say, "I am Daddy" and pretend in his verbalizations and behavior that he was his father. He behaved "as if" he were the person with whom he identified himself.

When fantasy scores were tabulated, it was found that this was the first process occurring during treatment to make a clear-cut change (see Figure 4). There was a sharp drop in the number of fantasy productions between Sessions III and IV. This change was followed by a drop in identifications during Play Session IV and was followed by a sharp

FIGURE 4

FANTASY SCORES DURING TREATMENT SESSIONS



10 children, 8 play sessions of ½ hours each
total 80 sessions or 40 hours of treatment.

increase in identifications in Play Session V.

It will be noted that activity did not show a sharp drop until Play Session VI. This points toward the possibility of an orderly sequence of processes which take place with this type of play therapy when used with normal preschool children.

The t score for fantasy between Play Session I and Play Session VIII was significant at the 5% level. This shows that as treatment progressed, fantasy decreased (see Figure 4 and Addenda for raw data).

Since all four processes, aggression, activity, identification and fantasy decreased during the course of eight play therapy sessions, it was felt they all might be related to the stage of treatment. For this reason an analysis of Treatment x Levels was made to see if there was interaction between level of play therapy and measures of treatment.

The F was 49.44, which is significant at the 1% level for Treatments, but there was no significant difference between levels or any significant interaction between Treatment x Levels.

TABLE 6

Results of analysis of variance treatment x levels for eight play sessions and four measures of Treatment, aggression, activity, identifications and fantasy. N-320.

Source of Variance	df	Sum of Squares	Mean Square	F
Treatments (A)	3	10,680	3,560.00	49.44*
Levels (L)	7	1,708	244.00	3.38
Cells	31	13,969	450.61	
Treatment x Levels	22	1,581	75.29	1.04
Within Groups	288	20,746	72.03	
Total	319	48,702		

*The F of 49.44 was significant at the 1% level

CHAPTER V

DISCUSSION OF RESULTS

The purpose of this experiment was to determine the relationship between satiation and aggressive molar behavior in a play therapy situation with nursery school children. A modified version of David Levy's release therapy was used which was called Satiation Treatment (25). Group I, the experimental group was given 8 half-hour play sessions, using this technique, while Control Group II received no treatment.

During the play therapy, the therapists activity was directed toward helping the child express and act out his aggression. Allen calls this a "reconditioning" process. This technique represents a purposeful and controlled use of the play situation (1).

Two measures of satiation during treatment were used: (1) overt aggressive verbalizations and actions and (2) activity. The correlation between aggressive behavior and activity was .32 which was significant at the 1% level, N = 80. Statistical results indicated there was a significant relationship between Satiation Treatment and aggressive behavior. The t for pre- and post-treatment measures of aggression for Group I was 4.22, significant at the 1% level, while there was no significant change in pre- and post-

treatment observations of aggression for the Control Group. An analysis of variance indicated significant differences between the treated and untreated groups. F was 9.35 significant at the 1% level. An analysis of behavior during treatment indicated that as treatment progressed there was a decrease in the number of aggressive acts in most cases. The t between Play Session I and Play Session VIII was 3.93, significant at the 1% level.

Upon examining the relationship between magnitude of absolute difference between pre- and post-treatment aggression scores and number of aggressive acts tabulated during treatment, the correlation was close to zero. For instance, J. H. who had the greatest absolute difference between pre- and post-treatment scores on aggression--his pre score was 84 and post 12--only performed 148 aggressive acts during the 8 treatment sessions. On the other hand, the boy who ranked 5th in absolute difference between pre- and post-treatment aggression scores--his were pre 65 and post 37--performed 337 aggressive acts during treatment. Thus, there is no one-to-one relationship between the number of aggressive acts performed during treatment and the change in behavior after treatment. This brings us to the conclusion that sheer repetition of aggression alone does not account for the decrease in aggressive behavior.

There were indications that other processes such as:

activity, fantasy and identification tended to decrease also as treatment progressed. There were significant differences in activity between Play Sessions I and VIII at the 1% level. Also decreases in amount of fantasy and number of identifications made between Play Sessions I and VIII, a significant at 5% and 1% level of confidence. This points up the fact that there was no clear-cut indication as to which of the four processes was bringing about the significant changes in aggressive behavior. Any attempt to isolate any one variable which might account for the change was unsuccessful, as the correlations between magnitude of absolute difference between pre- and post-aggression scores did not correlate with the magnitude of aggressive acts during treatment, or the amount of activity during treatment, the number of identifications or the extent of the fantasy.

Inasmuch as all behaviors tabulated during treatment showed a decline, it is possible that the chief effect of treatment was to diminish activity of all kinds. A test of this speculation would involve further study using some other kind of play in order that the specific effects of aggressive play might be identified.

Since these processes which were measured in this experiment are the same as those listed by Brenner in his discussion of normal ego development, it was felt that play therapy as used here was probably a method which acted as an aid to ego growth. Brenner says that neutralization of

drives, (1) both aggressive and sexual, (2) development of identifications; (3) development of fantasy to assimilate and rework experience, and (4) "normal" anxiety which acts as a "signal" of danger--are processes which are fundamental and vital to ego growth.

In this experiment there was a "neutralization" of the aggressive drive and during the process of treatment there was development of identifications and fantasy. Anxiety also increased as shown by pre- and post-treatment scores of anxiety for Group I.

Identifications are important in character construction since anomalies of identification, as well as "identification with the wrong object" result in pathological character traits (18), (17). Not only did the children in the satiation Group I make identifications with mother, father, teacher, siblings and various T.V. characters, some of them also identified with the therapist.

Thus, if a child identified with a permissive person, who also had control of her aggressive impulses, he might become more permissive with others and thus become less aggressive. This is one speculative possibility as to why this behavioral change occurred.

Levin and Sears, found that the more strongly a child is identified with a given parent, the more nearly will he approximate in doll play the level of aggression he perceives

as characterizing the parent (3).

Brenner states that fantasy is an aid to externalization of feeling, assimilation of conflictual material and important for its repetition as a "working-through" of past unpleasant feelings. Dolls and other play material are utilized to provide a structure for play activity and fantasy and help the child objectify his anxieties (11).

According to Fenichel, the child in his play not only acts out or dramatizes the exciting experiences of the past, but also anticipates what he expects to happen in the future (17). Whenever the organism is flooded with a large quantity of excitation, it attempts to get rid of it by subsequent active repetitions of the situation that induced the excessive excitation. This takes place in games, dreams and fantasies of little children. Thus, it may not be the fantasy per se, that was important in bringing about change, but how the child used fantasy to resolve conflicts.

Fantasy, identifications, and acting out are illustrated in the case of J. R. He came in during the 5th play session and began to hit the therapist with the toy knife. The therapist asked, "Who am I?" He said, "You are the bad wife, you run around with men and do bad things." Then the therapist asked, "Who are you?" He said, "I am the Daddy, I'm going to kill you."

This illustrates the use of fantasy and acting out--to

work-through emotional problems which had not been resolved. It makes it possible for the ego to master conflictual material and plays a role in delineation of the transference phenomena.

The fourth main process in ego development is that of anxiety. It will be recalled that the second hypothesis: "that if aggression is a defense against anxiety, that when aggression is lowered anxiety will be increased," was substantiated.

To cite just one example of the importance of anxiety as a part of normal ego growth, let us cite a child with a primary behavior disorder. Dr. Maurice Friend describes these children as individuals who seem peculiarly unable to profit from experience, primarily in consequence of a deficiency in conscious anxiety (27). Children with character disorders develop in reaction to environmental influences in the form of persisting behavior patterns. They are often in conflict with the environment and there is an absence of guilt. The abnormality seems to lie in what has happened to the child's aggressiveness. Children with primary behavior disorders have more aggression than the average child and the aggression has not been internalized so there can be self-criticism or guilt. With children of this type, it is the task of the therapist to induce a modicum of conscious anxiety so they can learn patterns of behavior and anxiety

reducing responses which are socially desirable.

Pollak (27) reminds us that some therapists are inclined to consider the existence of all anxiety as necessarily undesirable. They may disregard the question whether it is not the morbid nature of anxiety in the individual instance, or the learning of undesirable anxiety reducing mechanisms that is undesirable rather than the existence of anxiety as such.

Brenner states that anxiety is the process which is really responsible for the ability of the ego to oppose and master id impulses to a certain degree at certain times. With age, there is a gradual increase in the individuals capacity to postpone the attainment of pleasure and the avoidance of unpleasure. This capacity for toleration of anxiety, and ability to delay gratification of impulses is basic to ego development. Brenner lists "signal" anxiety as the type helpful in ego growth (11).

CHAPTER VI

SUMMARY AND CONCLUSIONS

In this experimental study of satiation of molar aggressive behavior during play therapy, it was found that aggression was lowered. There was a significant difference at the 1% level between pre- and post-observations of aggression on the children in Group I, the experimental Group. However, since this particular experimental design did not allow for isolation and manipulation of the variable of satiation, it cannot be concluded that the change in behavior is due to satiation alone.

Had not the therapeutic relationship been a permissive accepting one, it is doubtful that satiation would have taken place. It was also shown that sheer repetition of activity alone did not bring about the change in behavior, since some of the children with the highest aggressive and activity scores during treatment showed the smallest amount of change.

Other factors such as identifications and fantasy entered into the therapeutic process. However, it is not the identification or fantasy per se, but how the child utilized these processes that is probably significant.

Thus, in any discussion of results, it is necessary to take into account the fact that without isolating the variable

of satiation, we cannot conclude that this alone caused change. We must consider, study, and measure other factors such as: (1) the therapeutic relationship; (2) type of identifications, intensity of identification; (3) amount of positive transference; (4) how the child utilized his fantasy; (5) how this effects ego growth.

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APPENDIX

APPENDIX A

Summary table for Group I with raw data scores for Aggression, Anxiety and I.Q. Pre- and Post-treatment

Group I. Experimental Group. Ten children selected from First Presbyterian Church Kindergarten. Age range 4 to 5-11. Nine boys and one girl, selected from 24 most aggressive and least aggressive at this school. All scores above mean on Body's aggressive scale. Mean for total 24 was 32.33.

Name	Pre-treatment Aggression	Post-treatment Aggression	Pre-treatment Anxiety	Post-treatment Anxiety	I.Q.
S.R.	84	12	66	79	95
D.F.	72	29	29	43	109
J.H.	65	37	36	29	119
D.H.	54	20	22	36	100
S.J.	54	51	14	36	115
J.W.	45	21	79	79	117
G.M.	41	16	7	left school	144
A.N.	40	35	0	79	116
C.R.	40	23	29	20	109
A.W.	39	26	36	50	126
Mean	53.4	27.0	31.8	50.1	115
Sigma	15.65	12.16	24.68	23.19	
N-10					

The t scores calculated to determine mean differences between pre- and post-aggression in Group I. t was 4.22 significant at 1% level. Then t scores for anxiety pre- and post-treatment computed. t for anxiety was 4.16 which is significant over 1% level.

APPENDIX B

Summary table of raw data for Group II showing scores on Aggression, Anxiety and I.Q. Pre- and Post-treatment data

Group II. Control Group (no treatment). Ten children selected from the Episcopal Kindergarten. Age range 4 to 5-11 -- ten boys, selected from the group of 24 most aggressive and least aggressive at this school. All scores above the mean of 35.7 on Body's aggressive scale. Mean for total twenty-four was 35.7.

Name	Pre-treatment Aggression	Post-treatment Aggression	Pre-treatment Anxiety	Post-treatment Anxiety	I.Q.
B.H.	85	86	42	50	125
B.N.	84	86	28	42	81
C.R.	84	96	21	28	104
P.G.	71	86	28	21	110
K.N.	68	72	28	21	124
T.W.	68	50	50	57	115
G.H.	68	40	35	28	119
D.McK.	67	64	100	refused	125
R.D.	49	40	0	0	refused
B.A.	43	40	21	42	97
Mean	68.5	66.0	35.30	32.11	111.33
Sigma	14.1	22.15	24.78	16.49	
N-10					

t Scores were calculated between pre- and post-treatment means for Control Group II for aggression; t was .30, not significant; t scores computed on pre- and post-anxiety Group II. The t was .60 which is not significant.

APPENDIX C

Aggression Scores During Treatment

(Arranged according to greatest change after treatment)

N = 10

Satiation Treatment Group I

	Scores of absolute difference	Play Sessions							
		I	II	III	IV	V	VI	VII	VII	Total
S.R.	72	35	32	15	8	14	15	22	7	148
D.F.	43	22	20	20	13	10	13	10	9	108
D.H.	34	24	16	21	14	15	13	7	8	118
J.H.	28	47	45	70	49	34	32	32	28	337
G.M.	25	23	14	15	11	24	4	5	9	105
J.W.	24	35	44	29	27	22	12	20	45	234
C.R.	17	31	20	28	23	19	10	11	10	152
A.W.	13	31	10	17	21	15	3	5	3	105
A.N.	5	24	10	9	8	8	10	12	9	98
S.J.	3	32	25	33	6	39	14	32	6	187
Total		304	216	227	180	200	126	156	134	
Means		30.4	21.6	22.7	18.0	20.0	12.6	15.6	13.4	

APPENDIX D

Activity During Play Sessions as Recorded by Electric Computer

Subject	Play Session								
	I	II	III	IV	V	VI	VII	VIII	Total
1 Stephen R.	435	438	630	653	529	490	483	277	
2 Dale F.	168	263	383	400	290	231	365	208	
3 Dennis H.	636	428	361	426	407	383	423	386	
4 Jeff H.	783	797	345	615	556	316	298	319	
5 Gary M.	303	425	363	452	462	251	362	262	
6 Jimmy W.	444	317	344	334	549	337	384	358	
7 Charles R.	490	470	483	332	242	143	238	104	
8 Andy W.	500	381	473	558	414	248	352	394	
9 Alice N.	552	591	543	516	417	468	619	500	
10 Steve J.	390	321	481	405	458	311	347	227	
Total	4,701	4,431	4,406	4,691	4,324	3,178	3,871	3,035	
Mean	470.1	443.1	440.6	469.1	432.4	317.8	387.1	303.5	

APPENDIX E

Identification Scores of Satiation Group I

Play Sessions

Subjects Ranked for Greatest Dif. in Pre- and Post Aggression	I	II	III	IV	V	VI	VII	VIII	TOTAL
1	5	5	3	1	2	3	5	2	26
2	12	8	3	7	16	8	6	3	63
3	6	15	13	9	5	19	9	11	77
4	3	3	10	3	7	4	3	6	39
5	5	7	8	4	8	4	2	3	41
6	16	12	17	9	16	7	6	12	95
7	14	5	4	9	3	9	2	2	47
8	5	4	8	3	8	3	4	2	37
9	17	13	9	3	19	9	7	5	82
10	5	6	7	3	4	6	1	1	33
Total	88	78	72	51	88	72	45	47	
Mean	8.8	7.8	7.2	5.1	8.8	7.2	4.5	4.7	

APPENDIX F

Fantasy

Play Sessions

		I	II	III	IV	V	VI	VII	VIII	Total
1	S.R.	30	27	11	8	12	10	15	7	118
2	D.F.	15	14	19	9	3	5	8	9	82
3	D.H.	7	7	11	10	10	10	4	5	64
4	J.H.	22	5	44	20	2	12	10	13	128
5	G.M.	11	10	7	3	15	0	2	2	50
6	J.W.	18	37	22	12	17	3	19	50	178
7	C.R.	25	20	14	20	19	5	5	3	111
8	A.W.	15	10	17	8	10	2	3	3	68
9	A.N.	11	3	2	8	4	3	3	5	39
10	S.J.	17	9	18	2	18	13	20	0	97
		141	142	165	110	110	73	89	93	

APPENDIX G

NAME _____ PLAY SESSION # _____

DATE _____ SATIATION _____ PERMISSIVE _____

UTENSIL OF AGGRESSION	TYPE OF ACTION	TARGET OF AGGRESSION	VERBAL IDENTIFICATION	TIME	NUMBER

APPENDIX H

ACTIVITY DATA SHEET
(Mat Layout)

SUBJECT_____ SEX_____ SCHOOL_____

DATE_____ BIRTHDATE_____

15_____ 16_____ 17_____

11_____ 12_____ 13_____ 14_____

8_____ 9_____ 10_____

4_____ 5_____ 6_____ 7_____

1_____ 2_____ 3_____

DOOR

TOTAL _____

OBSERVERS NOTES:

APPENDIX I

BEHAVIOR RECORD SHEET

1. Aggression Director Toward Adults IN ACTION

0	1	2	3	4
No Aggression	Slight Aggression resists direction	Moderate Aggression Threatens attack	Marked Aggression Provoked attack	Excessive Aggression Unprovoked attack

2. Aggression Directed Toward Adults IN SPEECH

0	1	2	3	4
No Aggression	Slight Aggression resists direction	Moderate Aggression Brief verbalization	Marked Aggression Extensive Verbalization coherent	Excessive Aggression Disoriented incoherent

BEHAVIOR RECORD SHEET Cont'd.

3. Aggression Directed Toward Children IN ACTION

0	1	2	3	4
No Aggression	Slight Aggression Interferes in Activities	Moderate Aggression Threatens Attack	Marked Aggression Provoked Attack	Excessive Aggression Unprovoked Attack

4. Aggression Directed Toward Children IN SPEECH

0	1	2	3	4
No Aggression	Slight aggression verbalizes to himself	Moderate aggression Brief verbalization	Marked Aggression Extensive Verbalization coherent	Excessive Aggression Disoriented incoherent

BEHAVIOR RECORD SHEET Cont'd.

5. Aggression Directed Toward Objects IN ACTION

0	1	2	3	4
No Aggression	Slight aggression misuse; non destructive teasing	Moderate aggression Threatens attack	Marked aggression Provoked attack	Excessive aggression Unprovoked attack

6. Aggression Directed Toward Objects IN SPEECH

0	1	2	3	4
No Aggression	Slight Aggression Verbalizes to himself	Moderate Aggression Brief verbalization	Marked Aggression Extensive verbalization coherent	Excessive Aggression Disoriented Incoherent

DEFINITION OF THE CATEGORIES

Aggression Directed Toward Teachers (or adults)

In Action:

Excessively aggressive: child strikes the adult with an object or with hand or feet, or pushes or pulls an adult with no apparent cause; unprovoked attack.

Very aggressive: child strikes an adult in response to some provocation such as interference with his play; provoked attack.

Moderately aggressive: child raises his hand as to strike or makes attacking motions with no actual physical contact; threatens attack.

Slightly aggressive: child resists adult direction by running away or making himself rigid or limp; resists direction.

No aggression: Observed child shows no aggressive motor behavior toward adults.

In Speech:

Excessively aggressive: child shouts and/or screams at adult in loud voice--incoherent with possible crying; extensive incoherent vocalizations.

DEFINITION OF THE CATEGORIES Cont'd.

Very aggressive: child verbalizes extensively, but in coherent manner, no crying or screaming; extensive coherent verbalization.

Moderately aggressive: child verbalizes aggression briefly with single statement or word; brief verbalization.

Slightly aggressive: child grumbles or mutters to himself, not to recipient of aggression; verbalizes to himself.

No aggression: observed child showed no verbal aggression.

DEFINITION OF CATEGORIES OF AGGRESSION

Aggression Directed Toward Children

In Action:

Excessively aggressive: child strikes another child with an object or with hands or feet, or pushes or pulls a child with no apparent cause; an unprovoked attack.

Very aggressive: child strikes another child in response to some provocation such as interference with his activity; provoked attack.

Moderately aggressive: child raises his hand as if to strike or makes attacking motions with no actual physical contact; threatens attack.

Slightly aggressive: child interferes in another child's play or activity; interference.

No aggression: observed child shows no aggressive motor behavior toward children.

In Speech:

Excessively aggressive: child shouts and/or screams at another child in a loud voice; incoherent with possible crying, extensive incoherent verbalization.

DEFINITION OF CATEGORIES OF AGGRESSION Cont'd.

Very aggressive: child verbalizes extensively his aggression toward another child, but in coherent manner--no crying or screaming, extensive coherent verbalization.

Moderately aggressive: child verbalizes aggression briefly with single statement or word; brief verbalization.

Slightly aggressive: child grumbles or mutters to himself and not to recipient of aggression; verbalizes to himself.

No aggression: Observed child showed no verbal aggression toward children.

Aggression directed toward objects (such as toys, equipment, etc.)

In Action:

Excessively aggressive: child attacks some object with marked attempt to destroy or damage--characterized by persistence and disorientation--with no apparent cause; unprovoked attack.

Very aggressive: child attacks an object because it has not yielded to his efforts to manipulate it; provoked attack.

DEFINITION OF CATEGORIES OF AGGRESSION Cont'd.

Moderately aggressive: child threatens to attack an object; threatens attack.

Slightly aggressive: no force shown in attack--child misuses or abuses some toy by "teasing" it; misuse of object.

No aggression: observed child showed no aggressive motor responses toward objects.

In Speech:

Excessively aggressive: child shouts and/or screams at an object in a loud voice--incoherent with possible crying; extensive incoherent verbalization.

Very aggressive: child verbalizes extensively his aggression toward some object, but in coherent manner--no crying or screaming; extensive coherent verbalization.

Moderately aggressive: child verbalizes aggression briefly with a single statement or word; brief verbalization.

Slightly aggressive: child grumbles or mutters to himself and not to the object which is recipient of aggression; verbalizes to himself.

DEFINITION OF CATEGORIES OF AGGRESSION Cont'd.

No aggression: Observed child showed no verbal aggression toward objects.

Definition of aggression: Behavior which is directed immoderately to the mastery of the environment without reasonable regard to profit or safety, and without economy of material mastered.

PROJECTIVE TEST OF ANXIETY FOR PRESCHOOL CHILDREN

INSTRUCTIONS FOR ADMINISTRATION

I. Order of Presentation

1. Play with Younger Children
2. Child with Mother and Baby
3. Object of Aggression
4. Dressing
5. Play with Older Children
6. Going to Bed Alone
7. Toileting
8. Scolding
9. Neglect
10. Aggressive Attack
11. Picking up Toys
12. Isolation
13. Child with Parents
14. Eating Alone

Presentation of heads is alternated to avoid choice of face by position, i.e., one time the happy face should appear on the left of the two faces and the next time on the right.

II. Administration

The following explanations may be given on presentation of each picture, but this is not mandatory. Although these interpretations are often necessary with younger children, it is usually better to allow the child to structure the pictures for himself and thus encourage more significant projection.

1. Play with Younger Children. "What kind of a face do you suppose this child will have, a happy face or a sad face? He (she) is playing with some younger children."

2. Child with Mother and Baby. "What kind of a face do you suppose this child will have, a sad face or a happy face? He (she) is taking a walk with his (her) mother and baby."

3. Object of Aggression. "What kind of a face do you suppose this child will have, a happy face or a sad face?"

4. Dressing. "What kind of a face do you suppose this child will have, a sad face or a happy face? He (she) is dressing."

5. Play with Older Children. "What kind of a face do you suppose this child will have, a happy face or a sad face? He (she) is playing with some older children."

6. Going to Bed Alone. "What kind of a face do you suppose this child will have, a sad face or a happy face? He (she) is going to bed."

7. Toileting. "What kind of a face do you suppose this child will have, a happy face or a sad face? He (she) is using the bathroom."

8. Scolding. "What kind of a face do you suppose this child will have, a sad face or a happy face?"

9. Neglect. "What kind of a face do you suppose this child will have, a happy face or a sad face?"

10. Aggressive Attack. "What kind of a face do you suppose this child will have, a sad face or a happy face?"

11. Picking up Toys. "What kind of a face do you suppose this child will have, a happy face or a sad face? He (she) is picking up toys."

12. Isolation. "What kind of a face do you suppose this child will have, a sad face or a happy face?"

13. Child with Parents. "What kind of a face do you suppose this child will have, a happy face or a sad face? He (she) is with his (her) mother and father."

14. Eating Alone. "What kind of a face do you suppose this child will have, a sad face or a happy face? He (she) is eating."

VITA

Hardis Hargrove Saunders finished high school at Blue Mountain College High School in Blue Mountain, Mississippi. She also took some college work there, majoring in music. In 1941 she was assistant superintendent at the correctional institute for juvenile delinquents at Pineville, Louisiana. There she became interested in psychology. Hardis took her B.A. in psychology in 1947 and her Masters in 1948. Both degrees were from Louisiana State University.

She was director of a guidance center at Pineville, Louisiana from 1948 to 1954. She transferred to Baton Rouge Guidance Center to work on her Ph.D. She has had eight years of supervised experience in testing and psychotherapy with children.

Hardis obtains her Ph.D. in clinical psychology in August, 1960.

EXAMINATION AND THESIS REPORT

Candidate: **Hardis Hargrove Saunders**

Major Field: **Psychology**

Title of Thesis: **An Experimental Study of the Relationship Between Aggression and Satiation in Nursery School Children**

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination:

20 June 1960